

Ossipee Watershed Coalition Meeting

January 31, 2008

Ossipee Watershed Natural Resources Guide – Update

- Objective: Provide science information to aid municipal officials in their formulation and monitoring of ordinances to help sustain natural resources within the watershed
 - Ist Edition printed Nov. 1, 2007
 - Presented to each Town in Nov./Dec. 2007
- Presented at Annual meetings in Concord, Nov./Dec. 2007
 - NH Conservation Commissioner's Meeting
 - NH Watershed Conference
- Working document- new Chapter versions published as updated
 - Current Needs
 - Soils Chapter
 - Update of GIS Chapter
 - More sample ordinances
 - Other?

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Ossipee Watershed Town Ordinance Matrix

Purpose:

- Provide a list of Ordinances and Protection Plans that are important to the sustainment of our natural Resources
- Assess the status and effectiveness of available ordinances and plans within each town
- Provide municipal officials the opportunity to compare and discuss the need and structure of ordinances and plans
- Provide a 'scorecard' of how the watershed is doing in providing protection to our valued natural resources

Ordinance/Regulation Rating

Explanation:

ood: Full ordinance that has clearly stated controls, reflects current scientific and engineering practices, no legal loop-holes and unambiguous penalties that can be readily determined by selectperson

air: A basic ordinance with weaknesses that could cause equivocation in application

ending: Is actively being developed and has an assigned completion date

one: None

Ossipee Watershed Coalition Model Ordinance Compliance Matrix

	Effingham	Freedom	Madison	Ossipee	Sandwich	Tamworth
Natural Resources Plan	Pending	Pending	None	Pending	Good (2005)	Pending+
Septic System Ordinance/Reg.	Fair	Good	Fair	Fair	Good	Fair
Steep Slopes Ordinance/Reg.	Fair (15%)	Fair (25%)	Fair (33%)	None?	Good (25%)	Fair (15% subdivs only)
Tree Removal Ordinance/Reg.	Fair (scenic road)	Fair (Shoreline only)	Fair (scenic road)	None beyond Shoreland Protection	Fair (scenic road)	Fair (scenic road)
Soil Erosion Ordinance/Reg.	None	Fair (Site plan/Subdivs)	None	Fair (something in site plan/subdivs)	None	None
Stormwater Mgt. Ord/Reg.	None	Fair (site plan/subdivs)	Fair (site plan/subdivs)	Fair (site plan/subdivs)	None	Fair (site plan/subdivs)
Wetlands Reg. Ordinance	Fair	Fair	Good	Fair	Good	Good
Water Extract. Ordinance/Reg.	None	None	Pending (by citizen petition)	None	None	None
Groundwater Overlay/District	None	None	Good	None	None	None
Lighting Ordinance	Fair	Fair (site plan)	Fair	Pending (site plan)	Fair	None

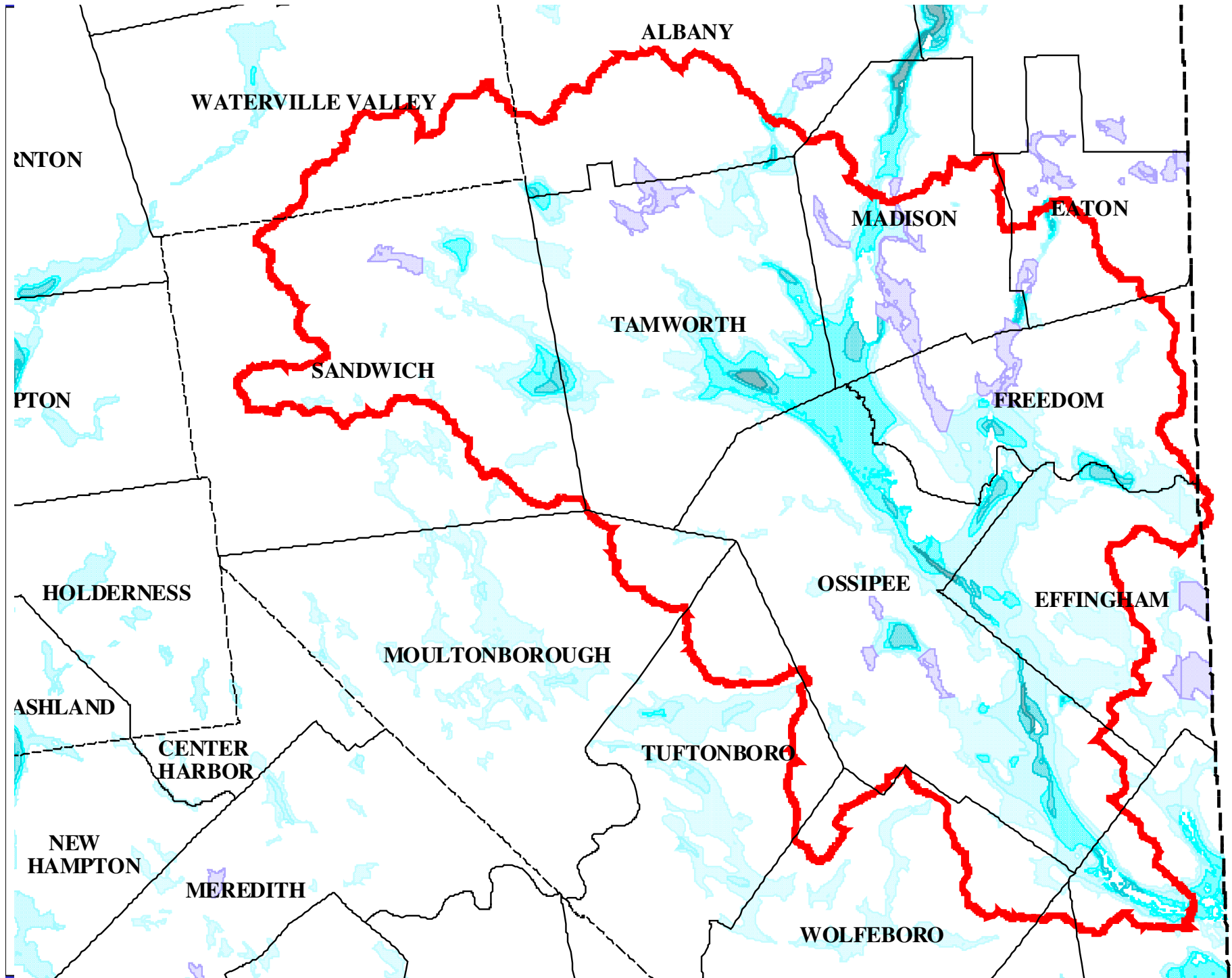
Ossipee Watershed

Source Water Protection Project

Goal 1: Form a steering committee of residents, municipal officials and water suppliers from each of the Watershed towns interested in addressing adverse impacts to groundwater quality.

Goal 2: Identify threats to groundwater resources and encourage reduction of threats by implementing best management practices. (Completion of PCS inventory and maps, and demonstrated interest in implementing BMPs following site visits.)

Goal 3: Provide the public with information about their groundwater resources, PCSs, BMPs, and planning measures.



	High Yield Aquifer (acres)	Protected High Yield Aquifer (acres)	% Protected High Yield Aquifer
Effingham	3,756.5	1,132.1	30.1%
Freedom	3,082.1	379.9	12.3%
Madison	3,544.1	564.0	15.9%
Ossipee	10,154.3	2,428.4	23.9%
Sandwich	1,303.1	24.2	1.9%
Tamworth	5,162.3	1,029.1	19.9%

	Wellhead Protection Area (acres)	Area WHPA Protected (acres)	% Protected WHPA	Coincident High Yld Aquifer & WHPA	Protected Coincident Aquifer & WHPA	% Protected Aquifer & WHPA
Effingham	4,503.3	1,091.2	24.2%	2,609.0	893.2	34.2%
Freedom	2,552.3	24.6	1.0%	582.0	1.7	.3%
Madison	1,984	31.2	1.6%	658.2	2.0	.3%
Ossipee	5,104.5	1,543.1	30.2%	1,350.6	543.4	40.2%
Sandwich	218.6	4.9	2.3%	0	0	0
Tamworth	1,838.3	163.6	8.9%	567.9	75.8	13.4%
Carroll County	38,799.8	4,997.1	12.90%	9,024.9	2,031.6	22.5%
New Hampshire	317,592.3	34,076.3	10.7%	33,270.8	5,140.7	15.5%

GW Protection is Cost-Effective

Costs of GW Contamination (ME) Municipal Systems

Community	Contaminant	Total Cost
Sabbatus	salt	\$500,000
Norway	gasoline	\$600,000
Lisbon	solvents	\$865,000
Pittsfield	landfill leachate	\$1,500,000
Guilford/Sangerville	flame retardant	\$236,000
Sanford	DNAPLs	\$510,000

Costs of GW Contamination

Community	Pop. Served	Total Cost
Norway ME	2,000	\$545,904
Gilbert LA	700	\$1,094,645
Middletown OH	60,000	\$1,222,906
Tumwater WA	13,000	\$1,712,440
Dartmouth MA	24,000	\$2,353,291
Gettysburg PA	12,000	\$4,015,351

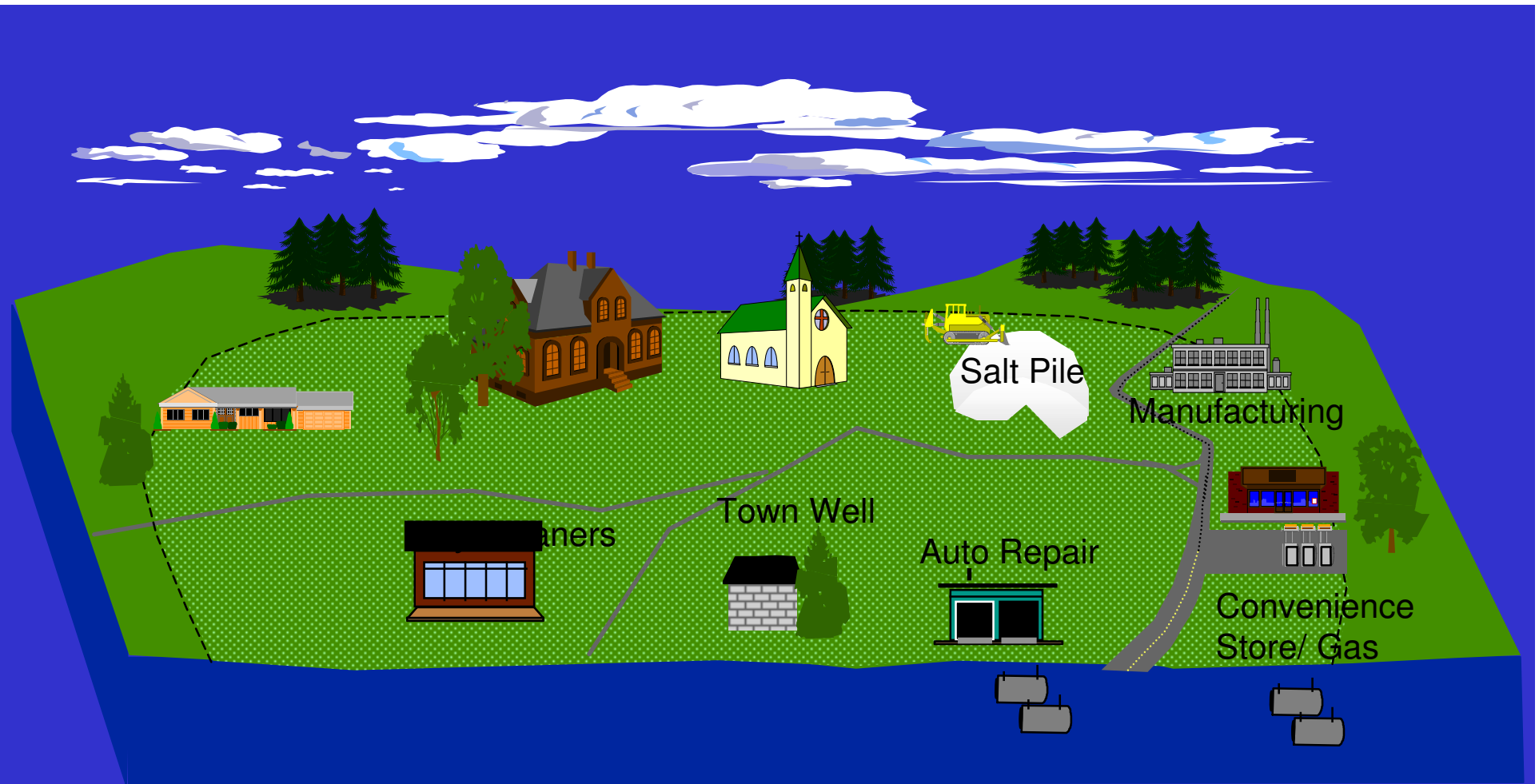
A glass of water is shown against a light blue background. The text "The Source of Your Drinking Water" is written in a black, serif font across the top of the glass. The text "The Ossipee Watershed" is written in the same font across the middle of the glass. The glass is partially filled with water, and the water level is visible.

The Source of
Your Drinking Water

The Ossipee Watershed

How to protect groundwater...

- Non-regulatory
 - Land protection
 - Public education
 - Outreach to businesses
 - Voluntary inspection
- Regulatory
 - Land use regulations
 - Best management practices

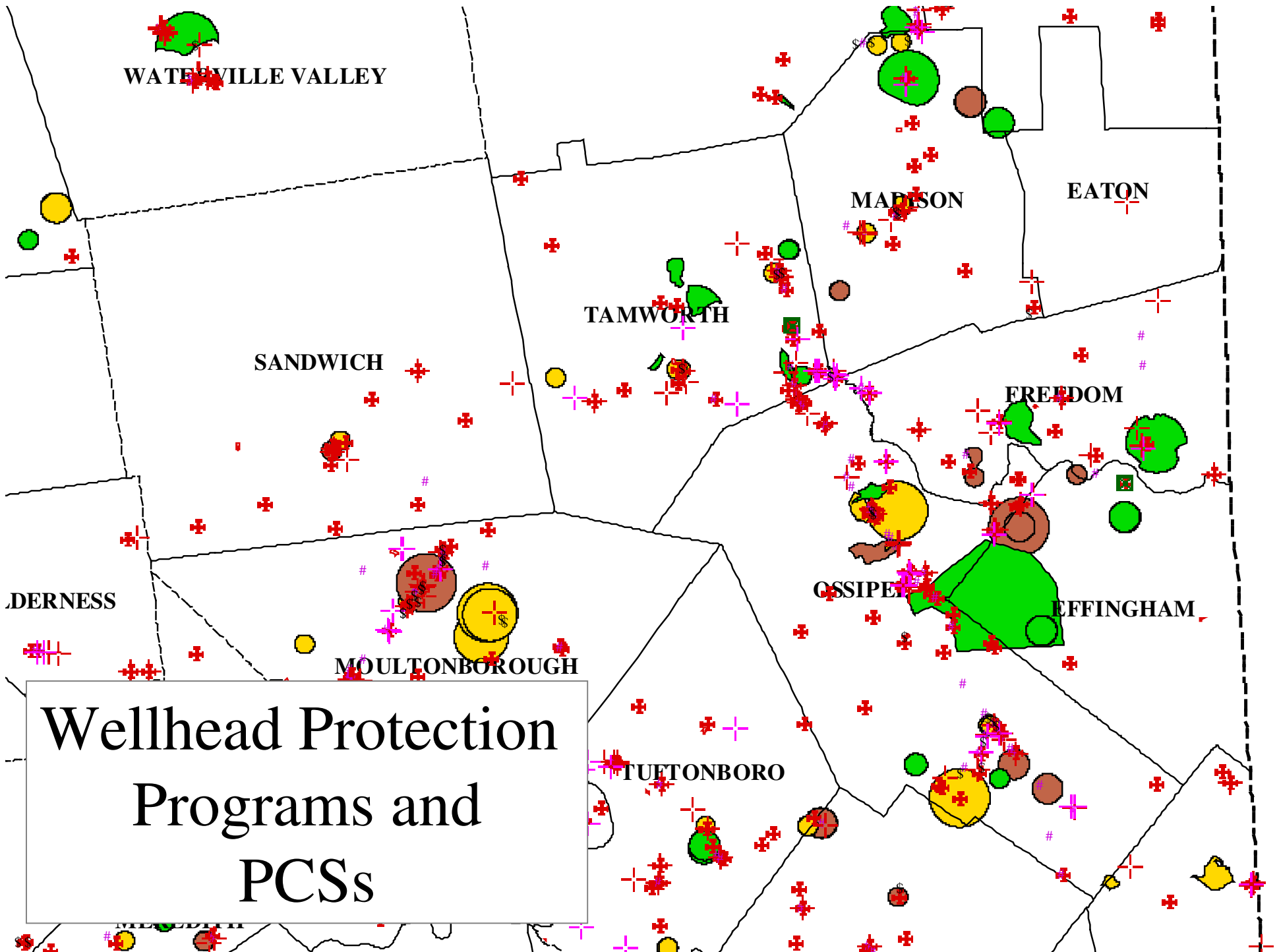


Potential Contamination Sources

1. Salt Pile
2. Auto Repair
3. Underground Tanks
4. Manufacturing
5. Dry Cleaners

Potential Contamination Sources

- Vehicle service & repair
- General service & repair
- Metalworking
- Manufacturing
- USTs and ASTs
- Waste & scrap processing
- Transportation corridors
- Large septic systems
- Laboratories & health care
- Agricultural chemicals
- Salt storage
- Snow dumps
- Stormwater infiltration
- Cleaning services
- Food processing
- Fueling & maintenance of earth moving equipment
- Concrete, asphalt, tar manufacturing, transport & storage
- Cemeteries
- Hazardous waste facilities



WATERVILLE VALLEY

MADISON

EATON

TAMWORTH

SANDWICH

FREEDOM

DERNESS

OSSIPEE

EFFINGHAM

MOULTONBOROUGH

TUFTONBORO

Wellhead Protection Programs and PCSs

- **Wellhead Protection Area**
- • Contributes water to public well
- • Needs to be managed to prevent
- contamination of well
- • Few state restrictions
- – Hazardous waste TSDFs
- – Landfills
- – Treated contaminated soils
- • Protection up to water supplier
- and/or municipality

PCS Inventory

- Local inventory of PCSs within the watershed
- “Windshield survey” – can any businesses or activities be taken off or added to the list?
- Field verify the locations of PCSs using GPS
- Map PCSs with GIS

ID	Name and Address	Program Interests	Contact Person/Additional Information:	Lat	Long	Descriptions & Observations
17143	5 STAR TOWING FORMER RYANS GARAGE RTE 16B Ossipee 50/16	Groundwater Permits Hazardous Waste Generator	Larry Ryan PO Box 1003 Ctr Ossipee, NH 03814	N 43 48 52.4	W 71 6 17.9	Name changed to Pete's Towing
4556	ABBOTT & STAPLES GENERAL STORE 540 RTE 25 E OSS�PEE 32/8	Site Remediation Underground Storage Tanks Initial Response Spill Hazardous Waste Generator Vapor Recovery Public Water System	Johnson's Fuel Services, Inc 105 North End Drive N Clarendon, VT 05759			
53592	ADVENTURER CAMPGROUND 13 DUNCAN LAKE RD OSS�PEE 56/2.1, 60.1, 60.2,61.1	Public Water System	William Lund PO Box 53 Ossipee, NH 03864			
58647	AMERICANA WENTWORTH HOUSE 70 MOULTONVILLE RD OSS�PEE 47/42	Underground Storage Tanks Hazardous Waste Generator	SMS NO 2-Ossipee, LLC 244 Highwatch Rd. Effingham, NH 03882			
53597	BEARCAMP RIVER CAMPGROUND 330 NEWMAN DREW RD OSS�PEE 2/192, 26/69, 73	Public Water System	Nancy Cramb PO Box 104 West Ossipee, NH 03890			
53603	BEARCAMP RIVER COTTAGES RR 1 BOX 129 OSS�PEE	Public Water System	?			
53626	BEAVER HOLLOW CAMPGROUND RTE 16 OSS�PEE 21/52	Public Water System	Different Drummer, LLC PO Box 437 Ossipee, NH 03864			
4576	BIG APPLE FOOD STORE OSS�PEE 865 RTE 16 OSS�PEE 19/79	Site Remediation Above Ground Storage Tanks Underground Storage Tanks Initial Response Spill Groundwater Permits Vapor Recovery Public Water System	CN Brown PO Box 200 South Paris, ME 04281			
53591	BLUFFS AT OSS�PEE LAKE DEER COVE RD OSS�PEE MAPS 38 & 39	Public Water System	Steve Foley Ossipee Bluffs Ass'n PO Box 481 Ctr Ossipee,			

- Best Management Practices
- (BMPs) for Hazardous Substances
 - Required statewide
 - Local monitoring for compliance (voluntary or regulatory)
 - Common-sense practices
 - Storage
 - Handling
 - Discharges
 - DES training



SWP Project Next Steps 2008:

1. **Aquifer Protection Steering Committee:** commitment & set future meeting dates
2. **Finish PCS windshield survey & enter data:** 2nd GPS workshop w/ UNHCE
3. **Double check PCS list** w/ health, zoning, code enforcement, fire or other knowledgeable town officials (via email, phone, letter, whatever works)
4. **Finalize PCS list, maps**
5. **Workshop w/ DES for training** to train volunteers & AP committee members to do BMP surveys
6. **1st letter sent to PCSs** w/ SWP brochure, RSA, surveys to set up site visit for BMP surveys w/ point people/AP committee
7. **Phone surveys** (sections 2-4 of “Managing Groundwater Protection Areas: Guidance & Sample Letters” http://www.des.state.nh.us/dwspp/pdf/managing_gpa.pdf) & schedule visits
8. **Community Workshop w/ American Groundwater Trust, Toxic Action Center, AP committee members w/ PCSs invited to learn about process**
9. **BMP site visits....**
10. **Follow up letters to PCSs w/ survey results, recommendations**
11. **PCS Report to towns & DES**

Helpful Resources: "The DES Guide to Groundwater Protection":

http://www.des.state.nh.us/dwspp/pdf/des_guide_to_ground_water.pdf.

“Managing Groundwater Protection Areas: Guidance & Sample Letters”

http://www.des.state.nh.us/dwspp/pdf/managing_gpa.pdf)